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CHEMICAL ABST. 5/70

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UR 0181

94428g Mechanism of deformation luminescence. Senchu-
kov, F. D.; Shamurak, S. G. (Inst. Fiz. Tverd. Tela, Chernog-
olovka, USSR). *Fiz. Tverd. Tela* 1970, 12(1), 9-12 (Russ).
The mechanism was studied of luminescence produced in the de-
formation of photochem. colored ionic crystals, KCl and KCl: Cu.
On interaction of dislocations with F-centers, electrons are re-
leased, which recombine with holes localized on the luminescence
centers. The spectrum was investigated of the deformation
luminescence, and detns. were made of the quantum yield and the
effective radius of bleaching of F-centers by dislocations.
A. Libackyj

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19800221

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USSR

UDC 621.643.25

BURDENKOVA, Z. M., SHMURNOV, A. Ye., SHAPOSHNIKOV, A. P., and
PANASYUK, V. S., Scientific Research Institute of Concrete and
Reinforced Concrete (NIIZhB)
"Scientific Characteristics of High-Pressure Abrasion-Resistant
Rock-Concrete Pipe"

Moscow, Stroitel'stvo Truboprovodov, No 9, Sep 73, pp 15-17

Abstract: A new construction of abrasion-resistant high-pressure
rock-concrete pipes, 5300 mm long, ID=1500 mm, OD=2500 mm, is in
development by NIIZhB. In order to determine the strength of these
pipes and their agreement with theoretical calculations, first
were tested for strength at inner hydrostatic pressure and at
outer load specimens of rock-concrete bushings for pipe cores. In
determining their supporting power by the bending moment
 $M = P \cdot r_m / \pi$, where P =linear concentrated force in kg.cm/m and r_m =
radius to middle wall thickness, the specimens were considered
as thin wall structures ($h/D \leq 1/10$). Their derived deformation
curves at outer load show that the rock-concrete material works
within the elastic limit up to the development of cracks. A sepa-
rate testing of the reinforcement revealed that in determining

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USSR

BUARDENKOVA, Z. M., et al., Stroitel'stvo Truboprovodov, No 9, Sept 73,
pp 15-17

the strength of reinforced rock-concrete pipes their resisting
force can be taken only 10-15 % of their tensile strength. The
characteristics of industrially manufactured rock-concrete pipes
are indicated and recommendations are given to favor their intro-
duction in practice.

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- 76 -

USSR

UDC 616.981.455-085.351-039.71-07:616.15-097.5-078.7

KANATOV, Yu. V., AYTKALIYEV, B. A., SHMUTER, and TYULEMBAYEV, M. A., Central Asian Antiplague Institute, Alma-Ata, and Central Institute for the Advanced Training of Physicians, Moscow

"Sensitivity of Reaction With Sensitized Erythrocytes for Detection of Antibodies in Persons Vaccinated Against Tularemia"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 10, 1971, pp 93-97

Abstract: The accumulation of antibodies in persons vaccinated against tularemia was traced using the agglutination, passive hemagglutination, and antigen neutralization tests and the sensitivity of these tests was compared. Specific antibodies were detected from 3 to 15 days after vaccination by all the serological tests used. The antibody titers were somewhat higher in the passive hemagglutination test than in the agglutination test during the first few days after vaccination. The titers were highest in the antigen neutralization test at all the periods checked, mainly due to detection of the total complete and incomplete antibodies.

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USSR

UDC 577.391

SHMITER, G. M., Chair of Roentgenology, Ukrainian Institute for the Advanced Training of Physicians

"Transformation of Isadrine and Tryptamine in Organisms of Irradiated Animals"
Kiev, Ukrayins'kyi Biokhmichnyy Zhurnal, Vol 43, No 6, Nov/Dec 71, pp 746-751

Abstract: The object of the experiments was to determine the disappearance rate of isadrine -- isopropylnoradrenalin and a substrate of catechol-O-methyltransferase, and tryptamine -- a substrate of monoamineoxidase in animals with acute radiation sickness. White mice 2-4 months old were x-irradiated with doses of 806 and 1320 rads in vivo. Subsequent examinations disclosed that when the animals were irradiated with 806 rad, isadrine disappearance proceeds at a normal rate in the initial stages of radiation sickness, but slows down by about 32% at the height of the disease. Following irradiation with 1320 rad, isadrine disappearance proceeds normally at the initial stages of the disease, slowing down by about 40% at the height of the affection.

The disappearance rate of tryptamine in animals irradiated with 806 rad is normal as long as the animals are in a satisfactory condition; at the height of the disease tryptamine metabolism is completely inhibited. When irradiated with 1320 rad the disappearance rate of tryptamine is reduced by 1/2

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SHMUTER, G. M., Ukrayins'kyy Biokhichnyy Zhurnal, Vol 43, No 6, Nov/Dec 71,
pp 746-751

19% on the first day and by 49% on the fourth day after the irradiation;
at the height of the disease it is reduced by 69%.

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- 22 -

Immunology

USSR

UDC 616.932-084.47-036.8-078.73

ROSHCHIN, V. V., STEPANOV, V. M., ~~SHMITER, M. F.~~, and GIL'MANOVA, N. A.,
Central Asiatic Scientific Research Antiplague Institute and Chardarin-
skaya Rayon Sanitary-Epidemiological Station

"Use of the Antigen Neutralization Reaction for Determination of Antibody
Level in People Vaccinated Against Cholera"

Moscow, Laboratornoye Delo, No 8, 71, pp 499-500

Abstract: The efficacy of cholera antibody erythrocyte diagnosticum used in the antigen neutralization reaction (ANR) to determine the antibody level in people vaccinated against cholera was studied. A group of adults was vaccinated twice in a 7-day interval with killed vaccine in a concentration of $8 \cdot 10^9$, with doses of 1 ml the first time and 1.5 ml the second time. It was found that the largest number of people with an antibody titer exceeding 1:40 and an arithmetic titer equaling 1:97 and 1:127 were found 6-9 days after the second vaccination. The number of people with such titers was considerably smaller during the first three days or 22-60 days after the second vaccination. The antibody titer in these groups also declined. Some variation in titer percentages found in people 22-60

USSR

ROSHCHIN, V. V., et al., Laboratornoye Delo, No 8, 71, pp 499-500

days after vaccination may be due to the fact that immunological rearrangement in the organism of different people may not take place at the same rate. It was established also that using the ANR with the antibody diagnosticum, it is possible to isolate antibodies from people vaccinated against cholera as late as 60 days after the vaccination.

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- 41 -

1/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--INCREASE OF PRECISION AND PERFORMANCE OF MACHINES WITH PROGRAM
CONTROL -U-
AUTHOR-(03)-RATHIROV, V.A., CHURIN, I.N., SHMUTER, S.L. S
COUNTRY OF INFO--USSR
SOURCE--INCREASE OF PRECISION AND PERFORMANCE OF MACHINES WITH PROGRAM
CONTROL (POVSHENIYE TOCHNOSTI I PROIZVODITEL'NOSTI STANKOV S PROGRAMMNYM
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--AUTOMATIC CONTROL SYSTEM, PROGRAMMED AUTOMATIC CONTROL,
MACHINE INDUSTRY/(U)SPID CONTROL SYSTEM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1725 STEP NO--UR/0000/70/G00/000/0001/0342
CIRC ACCESSION NO--AM0130582
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AM0130582

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. TABLE OF CONTENTS: PREFACE 3. CHAPTER I. CHARACTERISTICS OF MACHINES WITH PROGRAM CONTROL 5. II. GUIDE OF MACHINES WITH PROGRAM CONTROL 84. III. SCREW NUT GEARS IN FEED DRIVES OF MACHINES WITH PROGRAM CONTROL 139. IV. SELFADJUSTING SYSTEMS IN MACHINES WITH PROGRAM CONTROL 176. V. ANALYSIS OF FEED DRIVE SYSTEM 219. VI. COMPENSATION OF ERRORS OF "SPID" SYSTEM DURING PROGRAM DESIGN 273. APPENDIXES 296. I. TECHNICAL DATA OF MACHINES WITH DIGITAL PROGRAM CONTROL AND SYSTEMS OF CONTROL 296. II. TABLES FOR DESIGNING GUIDES AND SCREW NUT GEARS 312. III. FOREIGN PATENTS ON SYSTEMS AND UNITS OF PROGRAM CONTROL WITH MACHINES 328. LITERATURE 333. THE BOOK PRESENTS QUESTIONS OF INCREASING PRECISION IN DESIGN OF MACHINES WITH PROGRAM CONTROL AND MAINTENANCE OF THEM DURING OPERATION. THE BOOK WAS INTENDED FOR ENGINEERS, WORKING ON DIGITAL CONTROL BY MACHINES. IT MAY ALSO BE USED BY SPECIALISTS OF ALLIED AREAS OF TECHNOLOGY AND SCIENTIFIC WORKERS OF MECHANICAL ENGINEERING INSTITUTES.

UNCLASSIFIED

1/2 019
TITLE--IZVESTIYA SUMMARIZES EVENTS OF PAST YEAR IN ANTARCTICA. WHERE THE
MERIDIANS CONVERGE -U-
AUTHOR--SHMYGANOVSKIY, V.
COUNTRY OF INFO--USSR, ANTARCTICA
SOURCE--MOSCOW, IZVESTIYA, 28 JANUARY 1970, P 4
DATE PUBLISHED--28JAN70
SUBJECT AREAS--ATMOSPHERIC SCIENCES
TOPIC TAGS--SCIENTIFIC RESEARCH INSTITUTE, ANTARCTIC STATION, UPPER
ATMOSPHERE, ATMOSPHERIC WIND, SOUNDING ROCKET, METEOROLOGIC DATA,
ANARCTIC CLIMATE/(U)MOLODEZHNYAYA STATION, (U)LENINGRADSKAYA STATION,
(U)VOSTOK STATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1987/1141
CIRC ACCESSION NO--AN0104530
STEP NO--UP/9003/70/000/000/0004/0004
UNCLASSIFIED

PROCESSING DATE--11SEP70

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CIRC ACCESSION NO--AN0104530

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN AN INTERVIEW WITH IZVESTIYA CORRESPONDENT SHMYGANOVSKIY, DEPUTY DIRECTOR OF THE ARCTIC AND ANTARCTIC SCIENTIFIC RESEARCH INSTITUTE YE. KOROTKEVICH DESCRIBES BRIEFLY THE HIGH POINTS OF ACTIVITY AT THE VARIOUS SOVIET STATIONS IN THE ANTARCTIC DURING THE PAST YEAR. HE NOTES THAT "MOLODEZHNYAYA" STATION HAS BECOME ALMOST UNRECOGNIZABLE. THE ROCKET SOUNDING COMPLEX NOW OCCUPIES FOUR BUILDINGS, AND A LARGE RADIO CENTER IS UNDER CONSTRUCTION. A NEW LABORATORY FOR OBTAINING DATA FROM METEOROLOGICAL SATELLITES IS BEING OUTFITTED. "MOLODESHNAYA" IS DEVELOPING AS THE MAIN BASE OF SOVIET ANTARCTIC INVESTIGATIONS. AN EXTENSIVE INVESTIGATION OF OATES COAST IS BEING UNDERTAKEN IN ORDER TO FIND A SUITABLE LOCATION FOR A NEW SITE TO BE NAMED "LENINGRADSKAYA" STATION. DRILLING THROUGH THE ICE COVER CONTINUES AT "VOSTOK" STATION. THE AUTHOR ALSO MENTIONS SOME OF THE MORE INTERESTING NEWS REPORTS WHICH HAVE BEEN RECEIVED FROM ANTARCTICA. "MOLODESHNAYA" HAS BEEN STUDYING WINDS IN THE UPPER LAYERS OF THE ATMOSPHERE BY THE METHOD OF RADAR TRACKING OF METEOR TRAILS WITH THE SIMULTANEOUS LAUNCHING OF ATMOSPHERIC SOUNDING ROCKETS. WORKERS THERE ALSO USING LASERS TO STUDY THE SPEED OF ICE MOVEMENT.

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LIR9003

AUTHOR-- SHMYGANOVSKIY, V., CORRESPONDENT
TITLE-- A NEW TYPE ICEBREAKER WILL BE CONSTRUCTED IN THE
U.S.S.R.

NEWSPAPER-- IZVESTIYA, FEBRUARY 4, 1970, P 4, COL 2

ABSTRACT-- SHMYGANOVSKIY HAS LEARNED FROM EXPERTS IN THE MINISTRY
OF THE SHIPBUILDING INDUSTRY THAT SOVIET DESIGNERS ARE CURRENTLY
WORKING ON A NEW TYPE OF AN ATOMIC ICEBREAKER, THE "ARKTIKA", WHICH
WILL BE ABLE TO REMAIN IN THE NORTHERN WATER SIX MONTHS OUT OF THE
YEAR. ITS NEW REACTOR WILL PRODUCE POWER WITHOUT REFUELING 2.5 TIMES
AS LONG AS THAT OF THE ICEBREAKER "LENIN".

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RIGORS OF LIFE IN ANTARCTIC STATION DESCRIBED

Moscow IZVESTIYA 28 Jan 70 Morning Edition p 4 L

[IZVESTIYA special correspondent V. Shmyganovskiy article: "Where the Meridians Meet"]

LLR 9003

[Text] I have never seen such a large map of the sixth continent: it occupies almost the entire wall in the study of the deputy chief of the Arctic and Antarctic Scientific Research Institute, Ye. Korotkevich. I have never seen a map more...empty --without particular details of relief or the usual circles of populated points. But how many flags are on it, signifying scientific stations--Soviet, American, Japanese, Chilean, Argentinian, French. Antarctica is faithfully serving world science. Here, at the most southerly point of the planet, all roads lead north. In all senses, geographic and natural, this is the edge of the world. The scientists call conditions under which members of Antarctic expeditions live and work extreme. In comparison with these regions the severe Arctic at times appears on oasis in the desert, for the minimum temperature at the North Pole is 20 to 30 degrees higher than at the South Pole, which is above sea level. Everyone who comes here for the first time recalls

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SHAKIROV, R.
to
SHMYGANOVSKIY, V.